



# PACIFIC WHALE FOUNDATION

April 28, 2001

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*[Note: 3,000+ Petition Signatures on LFAS were submitted at the Hawaii Hearing]*

Dear Ms. Wieting:

As a scientist, I am writing to strongly oppose deployment of Low Frequency Active (LFA) Sonar. First, for my scientific qualifications, I am a Ph.D., the author of a book, many articles, and have been on the faculty at University of Massachusetts, and the University of California at Santa Barbara. I was a National Academy of Sciences Young Investigator in Coastal Ecology, an American Association for the Advancement of Science/EPA Fellow in Environmental Science & Technology, and a Fulbright Fellow on ocean management. I have studied the oceans my entire life with an emphasis on linking conservation policy and sound science.

As a scientist, I am alarmed by the tremendous scientific uncertainty over the ecological impacts of LFA—a system that could prove harmful in complex and cascading ways. But I am also very concerned that the DEIS and now FEIS produced by the Navy glosses over very large gaps in our knowledge, and presents what seems more an advocacy piece aimed at justifying a pre-determined conclusion. Simply put, our knowledge of myriad impacts of sound in the sea is far less encompassing—and data are far less certain—than what is presented in the EIS.

I have three fundamental objections as regards their request here to your agency. First, importantly, NOAA Fisheries is moving to adopt the 'Precautionary Principle' approach; this places a strong new burden of proof on the Navy to demonstrate clearly that their Active Sonar will not cause harm—a burden that is still not met by sparse studies, data and evidence to date.

Adopting the Precautionary Principle approach at NOAA Fisheries requires a marked departure from the status quo ante. For example it means recognizing protected marine mammals do not exist in isolation, but rather are seen as integral to predator-prey relationships and so dependent on healthy marine ecosystems and healthy recruitment in fish stocks.

Yet the EIS prepared by the Navy gives only a cursory look at potential, or known impacts of LFA Sonar on fishes, invertebrates, and marine ecosystems integrity in general. While I recognize that the Navy is interpreting the Marine Mammal Protection Act, and Endangered Species Act to not require significant review of the impacts to fish, other marine life, or ecosystems—notably, I believe the Navy's approach here is starkly inconsistent with the Precautionary Principle.



The Precautionary Principle is admittedly a new approach to marine resources management (Reference 1). Yet at your agency, new "tools embody" this Principle/approach (Reference 2).

Remarkably, the DEIS overlooks almost entirely impacts to all non-mammal/ endangered life in the seas. The FEIS lists just a few species it makes as indicators, and acknowledges that almost nothing is known about impacts of low frequency (LF) sound on those species—but it then reaches the (impossible) conclusion this means that there will be no impacts. This jump is exacerbated, where the EIS next has a 'no impact' conclusion for tens of thousands of species of fishes and other life about which absolutely nothing is known regarding impacts of LF sound.

This DEIS/FEIS approach surely fails even the most minimal requirements of science. For instance to conclude that there will be no impacts on sharks of any kind, they base this on just a few studies--often done on only a single member of a species! The FEIS acknowledges that studies of a single animal is an extremely poor way to measure all potential impacts to an entire species, but they nonetheless goes on to extrapolate the same conclusion to sharks of all types.

Secondly, the few "Offshore Biologically Important Areas" the Navy exempts from potentially harmful LFA activities do not reflect important areas of rich fisheries biomass and productivity. While the Navy has proposed a handful of OBLAs, these in no way reflect crucial areas of ocean such as the many, crucial Large Marine Ecosystems known to occur outside of the 12-nm limit. These can be key: witness the pollock-seal relationships in the North Pacific.

As an essential agency that's tasked with the oversight of protected species and so fish stocks on which they must depend, I trust that you will mandate a more serious science-based look at how LFA Sonar may disrupt even fish assemblages and ecosystems in genuine biologically important areas. Moreover, resonance frequencies of cavities and swim bladders is a highly complex--yet very salient issue the Navy should not be able to so easily dismiss out of hand.

And third, I suggest this LFA Sonar may also violate new Essential Fish Habitat guidelines of the Magnuson-Stevens Act. Habitat is recognized as crucial for ecosystems health; this means a preference for broader ecosystems-based management, over generally single-stocks assessments.

In light of changes at NOAA Fisheries, where the Precautionary Principle is bringing new ways of looking at management with realistically conservative, science-based views of complex systems, it seems clear the Navy's EIS is overly simplistic and un-scientific. It overlooks the potential impacts to fish stocks, ecosystems, recruitment, etc—and hence protected species impacts. As such, it fails to provide sufficient information upon which a decision can be made.

Finally, I incorporate my previous concerns expressed over potential direct impacts to cetaceans. These too appear to strongly raise a need for further scientific investigation into various issues--such as air-space resonance—a point being raised by some leading scientists.

  
Robert J. Wilder, J.D., Ph.D.

Reference 1. Wilder, R., Tegner, M. & Dayton, P., 1999. "Saving Marine Biodiversity", Issues in Science & Technology (Natl. Academy of Sciences) <http://bob.nap.edu/issues/15.3/wilder.htm>  
Reference 2. Letter from Andrew Rosenberg, Deputy Director, National Marine Fisheries Service, to Issues in Science & Technology, Summer 1999. <http://www.nap.edu/issues/15.4/forum.htm>